Environmental Health Activities in Virginia

NCEH in Partnership with Virginia

The National Center for Environmental Health (NCEH) is part of the Centers for Disease Control and Prevention (CDC). NCEH's work focuses on three program areas: identifying environmental hazards, measuring exposure to environmental chemicals, and preventing health effects that result from environmental hazards. NCEH has approximately 450 employees and a budget for 2004 of approximately $189 million; its mission is to promote health and quality of life by preventing or controlling diseases and deaths that result from interactions between people and their environment.

NCEH and partners in **Virginia** collaborate on a variety of environmental health projects throughout the state. In **fiscal years 2000–2004**, NCEH awarded more than **$12.5 million** in direct funds and services to Virginia for various projects. These projects include activities related to addressing asthma from a public health perspective, helping state public health laboratories respond to chemical terrorism, and preventing childhood lead poisoning. In addition, Virginia benefits from national-level prevention and response activities conducted by NCEH or NCEH-funded partners.

Identifying Environmental Hazards

NCEH identifies, investigates, and tracks environmental hazards and their effects on people's health. Following are examples of such activities that NCEH conducted or supported in **Virginia**.

Asthma

- **Controlling Asthma in American Cities**—NCEH is funding the **Bon Secours Richmond Health Care Foundation** to conduct the Controlling Asthma in the Richmond Metropolitan Area (CARMA) project. The purpose of the project is to decrease asthma-related morbidity and use innovative collaborative approaches to improve asthma management among urban children younger than 18 years of age. Funding began in fiscal year 2001 and continues through fiscal year 2007.

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- **Addressing Asthma from a Public Health Perspective**—NCEH is funding the **Virginia Department of Health (VA DOH)** to develop an asthma-control plan that includes disease tracking, science-based interventions, and statewide partnerships to reduce the burden of asthma in the state. VA DOH completed its asthma-control plan and is implementing the plan and enhancing its asthma surveillance system. Funding began in fiscal year 2001 and continues through fiscal year 2007.

Health Studies Branch Activities

- ***Pfiesteria piscicida*-related Illness and Harmful Algal Bloom Surveillance and Prevention Program**—NCEH funds six Atlantic coast states, including **Virginia**, to conduct surveillance for possible *Pfiesteria piscicida*-related illnesses and to identify activities and other factors that appear to increase risk for illness from harmful algal blooms. Persons calling state health departments with concerns about symptoms they believe are related to *Pfiesteria piscicida* are interviewed by state health department staff and provided information about *Pfiesteria piscicida*. Persons fitting the case description for possible estuary-related illness were referred to a physician for medical followup. Information obtained from this surveillance system will be used to develop intervention and prevention activities to reduce the risk for *Pfiesteria piscicida*-related and other harmful algal-bloom illnesses in people exposed to estuarine waters. Funding began in fiscal year 1998 and the program is ongoing.

- **Investigation of Mosquito Control and Pesticide Exposure**—On September 18, 2003, Hurricane Isabel made landfall in North Carolina

and quickly moved on to **Virginia**, resulting in flooding, widespread damage, and population displacement. Studies of the aftermaths of previous hurricanes have shown that within 5 to 7 days, mosquito populations increase 500% to 1,000%. Virginia planned aerial ultra low-volume pesticide spraying to control the adult mosquito population. Because of concerns about the potential acute and long-term health effects of mosquito spraying, health officials in Virginia asked for NCEH's help in monitoring pesticide exposure; CDC and NCEH provided 11 staff members to help in Virginia.

The NCEH laboratory analyzed urine samples from 150 volunteers in North Carolina and Virginia neighborhoods where spraying occurred for metabolites of organophosphorus and pyrethroid insecticides. The data indicated that no increased exposures resulted from the public health pesticide applications. A final report of the study was provided to the state health department.

Measuring Exposure to Environmental Chemicals

NCEH measures environmental chemicals in people to determine how to protect people and improve their health. Following are examples of such activities that NCEH conducted or supported in **Virginia**.

Funding

- **Antiterrorism Funding to Increase State Chemical Laboratory Capacity**—In fiscal year 2003, CDC provided more than $1.5 million to **Virginia** to help expand chemical laboratory capacity to prepare for and respond to chemical-terrorism incidents and other chemical emergencies. This expansion will allow full participation of chemical-terrorism response laboratories in the Laboratory Response Network.

  In addition, NCEH funds laboratory development and the purchase of state-of-the-art equipment in Virginia's public health laboratory to develop a network of chemical laboratories and transfer technology to measure chemical agents.

- **Biomonitoring Grants**—In fiscal years 2001 and 2002, NCEH awarded planning grants to **Virginia** to develop an implementation plan for a state biomonitoring program. In this way, the state could make decisions about which environmental chemicals within its borders were of health concern and could make plans for measuring levels of those chemicals in the Virginia population.

Services

- **Helping State Public Health Laboratories Respond to Chemical Terrorism**—NCEH is working with **Virginia**'s public health laboratory to prepare state laboratory scientists to measure chemical-terrorism agents or their metabolites in people's blood or urine. NCEH has transferred analytic methods for measuring chemical-terrorism agents (including cyanide-based compounds and other chemicals) to Virginia and will continue to transfer methods as they are developed. In addition, NCEH instituted a proficiency-testing program to measure the comparability of the state's analytic results with results from the NCEH laboratory.

- **Newborn Screening Quality Assurance Program**—NCEH provides proficiency-testing services and dried-blood-spot, quality-control materials to monitor and help assure the quality of screening program operations for newborns in **Virginia**. The importance of accurate screening tests for genetic metabolic diseases cannot be overestimated. Testing of blood spots collected from newborns is mandated by law in almost every state to promote early intervention that can prevent mental retardation, severe illness, and premature death.

- **Lipid Standardization Program (LSP)**—NCEH provides a lipid research laboratory in **Virginia** with accuracy-based standardization support for analytic measurement. This laboratory is involved in one or more ongoing lipid metabolism longitudinal studies or clinical trials that investigate risk factors and complications associated with cardiovascular disease. The LSP, supported by NCEH's Lipid Reference Laboratory, provides quarterly analytic performance challenges and statistical assessment reports that allow program participants to monitor performance over time. Monitoring performance ensures the accuracy and comparability of study results and findings.

Preventing Health Effects That Result from Environmental Hazards

NCEH promotes safe environmental public health practices to minimize exposure to environmental hazards and prevent adverse health effects. Following are examples of such activities that NCEH conducted or supported in **Virginia**.

- **Childhood Lead Poisoning Prevention Program**—The **Virginia Childhood Lead Poisoning Prevention Program (VA CLPPP)** has received NCEH funding since 1992. In 2001, the program screened 39,291 children for lead poisoning. The number of children under 6 years of age who had elevated blood lead levels decreased from 864 in 1997 to 456 in 2001. These decreases in blood lead levels are due to state program efforts funded in part by NCEH.

  VA CLPPP is using NCEH funds to continue use of its statewide electronic surveillance system to track and report elevated blood lead levels, as well as document case management and environmental activities. Funds are also being used to increase primary prevention activities in high risk areas and to enhance strategic partnerships.

Resources

NCEH develops materials that public health professionals, medical-care providers, emergency responders, decision makers, and the public can use to identify and track environmental hazards that threaten human health and to prevent or mitigate exposure to those hazards. NCEH's resources cover a range of environmental public health issues. These issues include air pollution and respiratory health (e.g., asthma, carbon monoxide poisoning, and mold exposures), biomonitoring to determine whether selected chemicals in the environment get into people and to what degree, childhood lead poisoning, emergency preparedness for and response to chemicals and radiation, environmental health services, environmental public health tracking, international emergency and refugee health, laboratory sciences as applied to environmental health, radiation studies, safe disposal of chemical weapons, specific health studies, vessel sanitation, and veterans' health.

For more information about NCEH programs, activities, and publications as well as other resources, contact the NCEH Health Line toll-free at 1-888-232-6789, e-mail NCEHinfo@cdc.gov, or visit the NCEH Web site at www.cdc.gov/nceh.


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